

Application No. 09/993,917
Amendment in response to October 5, 2006 office action

REMARKS

The present submission is in response to the Office Action mailed October 5, 2006.

In the Office Action mailed October 5, 2006, claims 1, 12, 23, 24, 26, 27, 34, 35, 37 & 38 were rejected under 35 USC 103(a) as being unpatentable over Sauer (USP 5,973,311); claims 2, 4, 5, 13, 14, 15 & 16 were rejected under 35 USC 103(a) as being unpatentable over Sauer in view of Kokie (USP 4,212,034); claims 3 & 14 were rejected under 35 USC 103(a) as being unpatentable over Sauer in view of Kokie and further in view of Pain (USP 6,801,258); claims 6, 7, 17 & 18 were rejected under 35 USC 103(a) as being unpatentable over Sauer in view of Kokie, Pain and further in view of Nishida (USP 4,996,600); claims 8-11 and 19-22 were rejected under 35 USC 103(a) as being unpatentable over Sauer in view of Kokie and Nishida; and claims 25 & 36 were rejected under 35 USC 103(a) as being unpatentable over Sauer in view of Pain.

Claims 1-44, as amended, and new claims 45 and 46 are pending.

Amendments to the Specification

The specification has been amended to introduce the term "unit cell charge integration capacitor", to distinguish it from the charge integration capacitor associated with the sense amplifier (see Fig. 1). The term "unit cell charge integration capacitor" appears in the amended claims.

The specification has also been amended to change the term "charge readout transistor" to "charge transfer transistor", which is used in the claims.

The specification has further been amended to introduce language describing an aspect of the circuitry seen in Figs. 1-3, 6 and 9 and recited, in pertinent part, in pending claims 1, 12, 23 and 34. No new matter is believed to have been introduced by this amendment.

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Amendments to the Claims

Independent claims 1 and 12 have been amended to recite that the array elements include "a plurality of charge integration capacitors, each charge integration capacitor associated with an amplifier and configured to sum charges from at least two unit cells."

Independent claims 23 and 34 have been amended to recite the step of summing the charge from "at least two of said unit cells, at each of a plurality of charge integration capacitors, each of which is associated with an amplifier."

Support for the feature added to claims 1, 12, 23 and 34 can be seen in, e.g., Figs. 1-3, 6 and 9, and the associated detailed description.

Dependent claims 2 and 13 have been amended to clarify that the "unit cell charge integration capacitors" and the "charge transfer transistors" are part of the unit cells, as seen in Figs. 1 & 2, and described in the original specification at page 8, lines 8-12.

New claims 45 and 46 are directed to amplifier selector(s) seen in Figs. 1 and 8. Language in the new claims can be found, at least in part, at page 10, line 26 – page 11, line 9 and in the description concerning Fig. 8.

Patentability of Independent Claims 1, 12, 23 and 34 over the Cited References

It is submitted that none of the references relied upon by the Examiner anticipate, or render obvious, the pending independent claims.

Sauer does not disclose a capacitor which is configured to sum charges from at least two of the unit cells.

Pain's circuitry discloses a *differential* readout of charges, and so does not contemplate a capacitor that is configured to *sum* charges from at least two unit cells.

Nishida, for its part, employs almost 20-year technology and neither shows or mentions a "capacitor", let alone one configured to sum charges from at least two unit cells.

Kokie, invented roughly 30 years ago, neither shows or mentions a "capacitor", let alone one configured to sum charges from at least two unit cells.

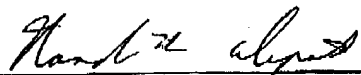
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Reconsideration of the application is requested. Claims 1-46 are believed to be in allowable form and define over the cited references. An early notice of allowance is requested so that the application may proceed to issue.

A separate fee transmittal sheet for the changes of this amendment is enclosed.

Respectfully submitted,

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